

# AMERICAN RAILROAD JOURNAL, AND MECHANICS' MAGAZINE.

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[The following communication, containing the substance of a paper presented to the Common Council of this City, is published by request. It is hardly necessary for us to say that we do not present it as containing our views of the subject, but the information concerning similar works in Europe may not be uninteresting to our readers.]

*Brooklyn, February 4, 1839.*

GENTLEMEN,—The subject of this paper embraces the question—whether the works in progress, under the direction of the Water Commissioners, cannot be easily improved, with great credit to the Corporation, and the saving of a vast sum of money?

I have arrived at this opinion, from examining the various plans, and the arguments adduced in support of the course pursuing by the Water Commissioners—by examining the works performed—the intended head of the aqueduct, and the natural capacity of the Croton River to supply an immense future population with water—and by comparing the aqueduct with the principal works for supplying London with that essential element.

The first of these is the New River, constructed in 1613, by Sir Hugh Middleton, which now supplies the central and northern parts of London with spring water, rising at the distance of twenty miles, led circuitously thirty-nine miles in an open aqueduct, on the sides of hills or over raised embankments of earth—passing over more than two hundred bridges or culverts, and one navigable canal—formed in various soils, clay, gravel, loam, sand or peat—of a sectional area, and bottom so closely resembling yours as to constitute it the most useful and efficient object of comparison imaginable.

If you bear in mind its particular characteristics, and compare it with your superior work, formed of cemented good stone walls, lined with cemented brick walls—an artificial continuous rock, protected from all weathers by several feet of earth covering—you must be conscious of its

superior strength, of its durability and security from accidents, which the London aqueduct might seem liable to from its inferior construction—formed only of earth of such various qualities, exposed to all weathers, it might be presumed to have occasioned incidental interruptions in its important office of supplying seventy-three thousand houses with water. But experience has shown its stability, for more than two centuries, to furnish a constant supply to the river head, or distributing reservoir, in capacity less than a million gallons—whence the water is distributed in sixty main pipes, for which purpose this reservoir has been found all-sufficient, and therefore would be all-sufficient here for the same office.

But the Water Commissioners are about constructing two most enormous and unnecessary reservoirs, you will soon perceive. The smaller to have a capacity of 19, and the larger a capacity of 158, and jointly of 180 million gallons, or two hundred times the capacity of the London reservoir, which has been found ample for more than two centuries; and the only reason given for these extravagant, these useless constructions, is, they are intended to furnish a supply of water during occasional fractures in your superior aqueduct, formed of the choicest materials and at unlimited cost.

Now, when you consider how strong, how enduring it must be, as compared with the London, and which, notwithstanding its inferior construction, has answered its purpose so long a period, you may consider this reason to be wholly unfounded and ridiculous.

But it is said, it has been found necessary to construct reservoirs at Philadelphia, and to extend them with every increase of machinery there, and they have probably thus been considered necessary here because they were found useful there. Let us calmly enquire why reservoirs are really needed at Philadelphia. That city is supplied by means of machinery with turbid water from the Schuylkill, the reservoirs there are required for purifying this turbid water, and for securing a continuous supply of pure water, and as the Croton water will also require purifying it has been too hastily assumed that it is equally necessary to have large reservoirs here as at Philadelphia. As the head of the Croton aqueduct is elevated many yards above the bed of the Croton, that river is being dammed to a great depth to supply the aqueduct with water, which is being collected into a head of several hundred acres; now, as any required portion of this head may be converted into a purifying reservoir of still water of great depth, at a small expense and a trifling alteration of the present dam, the water may thus be better purified from all sedimentary matter, previous to entering the aqueduct, and thus the corporation would be spared the great cost and inconceivable inconvenience of these immense reservoirs; and as an inconsiderable shallow basin or head may be advantageously substituted therefor, as in London, and which will better answer every necessary purpose of distribution, because no portion of the head or altitude of the stream above tide will be sacrificed thereby, as it evidently must be by drawing off the water from reservoirs of great and unnecessary depth.

To convert any required portion of the elevating reservoir into a head or purifying reservoir, or large basin of still water, it will be necessary to construct the waste weir (just commenced) on the left hand side of the Croton, instead of the right hand side, as now located by the Water Commissioners, and to build a party wall of stone a few feet in height on the table land opposite to the aqueduct, and which is naturally adapted to the purpose, so as to divide the current or running water of the Croton from

the main body of the head, which thus becomes the most efficient purifying reservoir imaginable, at little trouble or expense, and of any required extent.

You may now perceive these two enormous reservoirs are needless, as you will have one much more efficient ready made, free of expense for construction or for maintenance, of any capacity you may at any time prefer, requiring no attendance or repairs, subject to no accident, occupying no space useful for other purposes, supplying the water to the aqueduct perfectly purified—and thus saving the time, trouble, and expense of cleaning the aqueduct and reservoirs of offensive mud—saving you forty acres of land in the centre of your future metropolis for useful or ornamental purposes, wherein the projected reservoirs would form the most inconvenient, monotonous, disagreeable, and dismal spectacle imaginable—hateful and dangerous to the neighbourhood, if any should ever be formed near such insidious structures—which sometimes suddenly give way, and the larger the more liable they are to do so. The dreaded anticipation of such a possibility must be a perpetual bar to any improvement in their neighbourhood, or on any ground subject to their visitation; add to this, their inconvenience, their interruption of communication between extensive neighbourhoods. Imagine the extent of the larger,—thirty-three acres enclosed by a dead wall near thirty feet high—and you will have an ideal picture of such a monstrosity as was never seen, nor can ever be endured in the centre of any civilized place.

A review of the works for supplying the Eastern and Western portions of London with water, will also confirm and illustrate the foregoing positions. The Western Water Works, supplying 27,000 houses with turbid water from the Grand Junction Canal, and from the Thames, has a large distributing reservoir for purifying the water. While the Eastern Water Works, supplying 46,000 houses with pure water from the river Lee, has only a small distributing reservoir on an artificial conical hill of eighty feet in height, and little more in diameter at its summit; thus showing that a small distributing reservoir is only needed at New-York, and that the immense contemplated receiving reservoir is wholly useless and unwarranted.

The climate, also, and the purposes to which the water is to be employed, offer unanswerable objections to these immense animalcular ponds—in which the water will stagnate to waste by evaporation and filtration, and to poison the surrounding atmosphere with noxious exhalations in the fervent summer heat, and be lowered to the point of congelation in winter, and rendered wholly unfit to supply the fire engines, one of the most important and imperative purposes for which it is needed—and this evil will be also severely felt in the incessant fracture of the various pipes of supply.

In the reports for December, 1838, the Commissioners

estimate the distributing reservoir.....	\$360,700 00
Receiving reservoir.....	565,748 00
	<hr/>
	\$926,458 00

Add to this the unmentioned contingent works, the expense of maintenance, the value of the vast space they will occupy, and endeavour to conceive the property injured or destroyed by contiguity with these gloomy erections, the damages the corporation will be ultimately liable for—if you add all these considerations fairly into a sum, no doubt you

will find it onerous beyond your previous anticipation---though immense, yet much worse than useless.

The great dissatisfaction generally expressed at the low bridge proposed for conveying the Croton Aqueduct over the Harlem river, first attracted my attention to these subjects; and the Commissioners' statement of cost, so much more than double for a high than for a low bridge, of the same extent, and for the same purpose, seemed so singular as to be doubtful--and having found their statements very erroneous, I shall endeavour to show you the fact.

A careful inspection of the two plans will exhibit much irrelevant and useless workmanship, much unnecessary expense in their high bridge, and which contained errors of magnitude, with which you ought to be acquainted; while it was equally apparent that much essential work was omitted in their plan for a low bridge, and thus the comparison of these two plans was unfair, and the excessive cost of the high bridge was unfounded.

The aqueduct has a regular sectional clear area exceeding fifty feet superficial, and this area was maintained in the plan for the high bridge. But in the plan for a low bridge, the Commissioners propose to carry the water of the aqueduct over the Harlem River in four iron pipes, each three feet in diameter, and to construct a Bridge (or causeway rather) just sufficient to receive and protect these four iron pipes.

Now, the superficial area of a pipe three feet diameter being only seven feet, four such have an area of only twenty-eight feet--seven such pipes would not carry the volume of water brought by the aqueduct, nor near that quantity, when the pipes have been twice deflected in their descent and twice in their ascent, as proposed.

The unfairness, then, of the comparison of these estimates is now apparent, and that the full supply of the aqueduct will be needed in a few years you may perceive by comparing your growing population with that portion of London supplied by the New River, and you will find this diminished capacity of the aqueduct is miscalculated and erroneous, and that the full supply of it ought undoubtedly to be carried over the Harlem river, and at the established grade.

A high bridge of gneiss stone with granite arches wholly laid in cement, divested of all unnecessary, but retaining all necessary and useful workmanship, well and faithfully executed, supporting and perfectly protecting a cast-iron aqueduct of fifty feet available area or water course, constructed in a superior manner so as never to leak, capable of easy replacement, always subject to inspection, with iron waste weirs to discharge any superfluous water into the Harlem river, protected and surmounted by a double covered bridge, may be erected for the sum of six hundred and fifty thousand dollars.

If the foundations of said bridge were laid to low water mark with concrete, and which is the best and easiest mode in that situation, and in which coffer dams are of difficult construction, the bridge may be built, in all other respects alike, for six hundred and ten thousand dollars.

To ascertain the exact cost of the low bridge is difficult, from the Commissioners' report, as their estimates are so varied and indistinct.

The first estimate of low bridge given in their report,  
December, 1837, and for four iron pipes three feet  
diameter, with influent and effluent pipe chambers,

was..... \$426,027 00



In this estimate the low bridge and pipe chambers were estimated at the sum of... \$266,057 00  
In their estimates published in December, 1838, the low bridge is estimated at..... 360,000 00

Carry out difference..... 93,943 00

I have shown that seven pipes of three feet diameter are required to carry the volume of water; but as four pipes of four feet diameter would carry it, and as the bridge might carry them, and as it is favorable to their estimate so to consider it, we will take the increased cost of four four-feet pipes, and add one-third to thickness to obtain equal strength..... 93,964 00

\$613,934 00

An amount so corresponding with the cost of a high bridge, while so many allowances have been made in favor of the low one, as to show that in expense they are equal. You will thus see what a miserable bargain the Commissioners are so imperiously driving—what disgrace the Corporation must incur by having this miserable structure forced upon them. To call it a bridge is to abuse the term, as it cannot be travelled over, nor can it be navigated under except by inconsiderable vessels, and by them only for a short period during slack water, as is plainly evidenced in the rapid current at Macomb's Dam. What a curious anomaly it thus would exhibit in one of the first seaports in the universe—preventing or immeasurably delaying the improvement of a river equal in size to the Seine at Paris, so intrinsically valuable from its proximity to the ocean—preventing the proper improvement of a long line of water frontage of this great metropolis, and of the neighbouring county of Westchester, on which it will inflict such injury and disgrace as will and must be insupportable.

Having thus discussed two of the prominent errors in the Croton Works, and having made plans and models to explain and confirm the foregoing statement, I beg to submit them to your attention, with the observation, you are not to consider the subject exhausted of interest, but that other matters equally interesting and equally deserving your serious consideration remain untouched.

I have the honor to be, Gentlemen,  
Your very humble servant,

JAMES FROST.

Substance of a Report to the Common }  
Council of the City of New-York. }

Brooklyn.

Massachusetts Railroad Reports.

[We commence the re-publication of the Reports presented to the Massachusetts Legislature by the various Railroad companies in that State. The condensed statements of their expenses and income, will prove useful to members of the profession.

We are indebted to John M. Fessenden, Esq., for a copy of this valuable paper.

*Third Annual Report of the Andover and Haverhill Railroad Corporation.*

The Directors of the Andover and Haverhill Railroad corporation do hereby make their Fourth Annual Report, of their acts and doings, receipts and expenditures, under their act of incorporation.

In their last annual report, it was stated, that the road had been completed to the bank of Merrimack river, in Bradford, opposite to Haverhill, and opened for use.

For the extension of the road from this place to the line of the State, the most westerly of the three routes, authorized by the Legislature, has been adopted by the directors.

This route crosses the Merrimack, about two hundred feet to the east of the present depot in Bradford, thence along the bank of Little river, to its junction with the Boston and Maine Railroad, at the line of the State, being about three miles in length.

The grading of the first division of this last mentioned road, from the line of the State to Exeter, was commenced in October last, about five miles of the work is already completed, and it is understood, that the remaining portion of this division will be finished without delay.

At a meeting of the stockholders of the Andover and Haverhill Railroad, held the seventh instant, they voted to request the directors to proceed immediately in the erection of a bridge across Merrimack river, and in the construction of the remaining part of the road to the New Hampshire line.

To build the Merrimack River Bridge, the necessary depot buildings in Haverhill, and to finish the road to the line of the State, will require an addition to the present capital, of one hundred thousand dollars.

The Andover and Haverhill Railroad Corporation have contracted with the Boston and Maine Railroad, to do and perform all the transportation of persons and freight upon and over said Railroad, when completed to Exeter, on such terms and conditions as appear by their contract, which is hereto appended.

It appears from the books and accounts of the treasurer, on the first of January instant, that the total amount of capital paid in, was two hundred and seventy-five thousand six hundred and forty-one dollars.

The total amount of expenditures the last year, was ninety-six thousand eight hundred and forty dollars and ninety-one cents.

For the repairs of the road, five thousand one hundred and fifty-two dollars and eighteen cents.

For repairs of engines and cars, one thousand eight hundred and forty-one dollars and seventy-eight cents.

Interest paid on State scrip, four thousand five hundred and eighty-three dollars and fifty-three cents.

All other miscellaneous expenses, including the toll paid to the Lowell Road, thirty-four thousand six hundred sixty-one dollars and two cents.

Also for unsettled accounts of the last year, for the construction of the road and unliquidated land damages, fifty-five thousand one hundred and eighty-five dollars and ninety-three cents.

The amount received the last year, for the transportation of passengers was forty-two thousand nine hundred and fifty-two dollars, and seventy nine cents. For freight, twelve thousand six hundred and sixty-four dollars. Other miscellaneous receipts, one thousand seven hundred and eighty dollars and five cents.

The amount received for stock was, forty-two thousand one hundred and eighty-five dollars and ninety-one-cents. For State scrip, fifty thousand dollars.

The amount divided the last year, was nine thousand dollars; being three per cent. on three thousand shares, paid in October last.

All of which is respectfully submitted.

HOBART CLARK,  
EN. SILSBY,  
THOMAS WEST,  
AMOS ABBOTT,  
SAMUEL A. WALKER,  
*Directors.*

ANDOVER, January 29, 1839.

At a meeting of the Directors of the Andover and Haverhill Railroad Corporation, held September 7th, A. D., 1838,

*Voted.* That the agreement with the Boston and Maine Railroad of this date, be accepted, and that Hobart Clark, Esq., President of the Corporation, and one of the directors, be authorized to sign the same.

Said agreement is in the following words, to wit:

Whereas, at a meeting of the stockholders of the Andover and Haverhill Railroad Corporation, holden at Brown's Tavern, in Haverhill, on the twenty-fifth day of August, in the year of our Lord, one thousand eight hundred and thirty-eight, specially called for the purpose, it was voted, that the directors of the Andover and Haverhill Railroad Corporation be authorized to contract with the Boston and Maine Railroad, to transport all the passengers and freight over said Boston and Maine Railroad, for a term not exceeding five years from and after said road is completed to Exeter. Provided the same can be done, by paying said Boston and Maine Railroad a sum not exceeding six per cent. interest, per annum, on a sum not exceeding two hundred thousand dollars.

And whereas, at a meeting of the stockholders of the Boston and Maine Railroad, holden at Tucker's Tavern, in Plaistow, on the fifth day of September, in the year of our Lord one thousand eight hundred and thirty eight, it was voted,—That the directors of the Boston and Maine Railroad be and hereby are authorized to make such contract with the directors of the Andover and Haverhill Railroad Corporation, for the transportation of passengers and freight, upon such terms and conditions as they shall deem expedient, or the interests of the corporation shall require.

Now, therefore, this agreement made and entered into by the directors of the Andover and Haverhill Railroad Corporation, of the one part, and the directors of the Boston and Maine Railroad, of the other part, witnesseth:

That when said Boston and Maine Railroad shall be fully completed, in all respects, and ready to be opened for use with convenient depots, from the line of the Commonwealth of Massachusetts, at Haverhill, to some convenient place in the town of Exeter,—in consideration of the sum hereinafter mentioned,—the directors of the Andover and Haverhill Railroad Corporation shall take and hold full possession thereof for and during the term of five years from the time of taking possession, as aforesaid. That the said Andover and Haverhill Railroad Corporation, shall pay, for the use of said Boston and Maine Railroad, the sum of twelve thousand dollars annually, after taking possession of the same as aforesaid, to the treasurer of said corporation, and keep the same in good running repair during the term aforesaid, and give possession of said Railroad to the

directors of the Boston and Maine Railroad at the expiration of said term, in such repair, the necessary wear and decay of materials only excepted.

It is agreed, that the Railroad shall be constructed in the same manner and style, and shall be laid with the same kind of iron rail as the Andover and Haverhill Railroad.

It is farther agreed, by the parties aforesaid, that in case of failure in any part of the construction of the Boston and Maine Railroad, by reason of defect in the original construction of the road, the same is to be repaired at the expense of that corporation.

Provided, nevertheless, if the said road shall be constructed to any town beyond Exeter, the above contract is to be void.

Dated at Andover, the seventh day of September, A. D., 1838.

HOBART CLARK,

Director of B. & M. Railroad, J. BURLEY.

Director of A. & H. Railroad, ENOCH SILSBY.

#### *Seventh Annual Report of the Boston and Lowell Rail-road Corporation.*

To the Honorable the Legislature of the Commonwealth of Massachusetts:

The Directors of the Boston and Lowell Rail-road Corporation do hereby make their Seventh Annual Report of their acts and doings, receipts and expenditures, under their act of incorporation.

The total amount of capital paid in, is \$1,500,000 00

The amount expended the past year, exclusive of amount spent and charged to the cost of the road, is—

For repairs on the road, including \$4,295 90 for extra repairs and improvements, and removing snow,	15,734 90
For repairs on engines and cars,	10,945 77
For fuel, oil, salaries and other miscellaneous expenses,	48,917 27
	<hr/>
	\$75,595 94

The amount received the past year, is,—

For transporting passengers between Boston and Lowell,	\$94,569 10
For transporting merchandise " " "	76,236 47
" transporting United States Mail,	1,000 00
" transporting passengers for the Andover and Haverhill Rail road Corporation over our road,	14,514 21
For transporting merchandise for the Andover and Haverhill Rail-road Corporation over our road.	3,482 55
For transporting passengers on the Nashua and Lowell Railroad as per agreement with that corporation,	1,976 24
	<hr/>
	\$191,777 85

The amount divided during the past year is \$90,000, being six per cent. on the capital paid in—two dividends of three per cent. each.

Since the last annual report, in which an account was given in detail of the cost of the road up to that time, there has been expended towards the completion of the road, as follows:

For five miles second track, now complete from Boston to Wilmington, fifteen miles,	\$26,284 10
For land and buildings needed for merchandise at the Boston depot,	25,694 76
For locomotive engine, and ten new merchandise cars,	9,290 00



For sundry miscellaneous expenses,	\$1,881 38	
" superintendence;	2,400 00	
" land damages, &c.,	321 00	
" rail iron,	689 18	
" interest account	708 33	
	<hr/>	5,999 89
		<hr/>
		\$67,268 75
Whole amount expended on cost of the road, and appur-		
tenances, at the time of the last annual report,	1,508,394 75	
	<hr/>	
Whole cost of road to Nov. 30, 1838,	\$1,575,663 50	
	<hr/>	
The amount of debt due from the corporation,		\$55,380 00
The balance of profits on hand, from which a dividend		
of four per cent., or \$60,000, is declared, and will be		
paid on 11th Feb. next, is	128,769 72	
	<hr/>	
		\$184,149 72
The corporation have land on hand, for sale, cost, as ap-		
pears by the books,	\$48,635 58	
Cash balance on hand,	23,339 27	
Notes and debts due the corporation,	36,511 37	
	<hr/>	108,486 22
		<hr/>
Balance,		\$75,663 50

The corporation having accepted the act of our Legislature of April 9th, 1838, it is now contemplated to increase our capital stock in a sum sufficient to pay off our debts, and for such other expenditures on the road as may be required.

All which is respectfully submitted.

JOSEPH TILDEN,  
WM. APPLETON,  
JOHN BRYANT;  
P. T. JACKSON,  
GEO. W. LYMAN.

*Seventh Annual Report of the Boston and Providence Rail-road Corporation.*

To the Honorable Legislature of the Commonwealth of Massachusetts :

The Directors of the Boston and Providence Rail-road Corporation do hereby make their Seventh Annual Report of their acts and doings, receipts and expenditures, under their Act of Incorporation.

During the past year they have incurred a considerable expense, in repairing, strengthening, and widening their bridges, in the erection of a new engine-house in Roxbury, of passenger-houses in Dedham and Canton, and in laying a second track from Boston to the Roxbury depot. They have also settled several claims for land and damages. The only remaining claim of much consequence is that for passing across the lands which are partially covered by water west of Boston Neck. This they have long been endeavoring to compromise, and they trust it will be settled during the current year.

They have modified their contract with the Taunton Branch Railroad Corporation, for drawing their passenger and freight cars over our road, in conformity to the wishes of that Company. They have rescinded their contract with the Boston and New York Transportation Company in relation to the steam-boats, by mutual agreement.

The whole amount expended for construction of the road, buildings, and appurtenances during the past year, is

\$21,948 33

The total amount of capital stock of this corporation paid in, is

\$1,782,000 00

The expenses of the company the past year, exclusive of those mentioned in relation to construction, have been as follows.

For repairs of road, exclusive of bridges, \$11,211 00

" repairs of bridges, 5,645 69

\$16,856 69

" repairs of engines and cars,

19,953 02

" amount paid to the Rhode Island Rail-road Company for the lease of their road, bridge, and depot, under contract sanctioned by the Legislature,

6,468 10

" other miscellaneous expenses,

76,766 47

\$120,044 28

The receipts of the company during the past year have been as follows :

Cash received for transportation of passengers, \$196,974 73

" " for transportation of merchandise, 64,148 92

" " for transportation of mail, 2,250 00

" " for rents, 1,741 50

" " from the sale of 981 shares of new stock, at an advance of \$3,303 23-100 beyond the par value, amounting to \$101,403 23

The above advance is carried in the treasurer's books to interest account, leaving the balance of that account \$661 8-100 against the corporation.

The amount divided during the past year is \$136,312, being in two dividends.

The first dividend was declared in January, 1838, of 4 per cent. on the amount of capital stock then paid in, viz. on \$1,683,900, amounting to

\$67,356 00

The second dividend was declared in July last, of 4 per cent. on the capital stock then paid in, viz. on \$1,723,900, amounting to

68,956 00

Total,

\$136,312 00

All of which is respectfully submitted.

JOSIAH QUINCY, Jr.,  
JOSEPH W. REVERE,  
JNO. F. LORING,  
BENJ. R. NICHOLS,

*Directors of the Boston and Providence Rail-road Corporation.*

**Seventh Annual Report of the Boston and Worcester Rail-road Corporation.**

The Directors of the Boston and Worcester Rail-road Corporation respectfully

**R E P O R T :**

That during the past year the passenger and freight trains of cars have run regularly between Boston and Worcester.

There has been, within the year, no loss of a regular trip of the passenger train arising from obstructions by snow or any other cause. There have been several instances of detention of the trains by snow storms or accidents, but of the 1366 trips, eight only have occupied more than four hours.

There has been no accident which has caused any personal injury to any passenger on the rail-road, either within the past year, or since the opening of the road.

Some small expenditures have been made within the year, in the erection and completion of buildings at the freight depot in Boston, and also in improving and securing some parts of the Road.

The whole amount of capital stock paid in, is \$1,700,000 00

The expenditures within the year, exclusive of the amount charged to the construction of the road, amounted to viz : 85,572 97

For repairs of engines and cars, \$15,672 24

" repairs of road, 12,521 35

" fuel used in engines, 12,854 28

" oil and tallow for engines and cars, 1,985 82

" clearing road of snow, 43 96

" salaries and wages of officers, agents, and laborers of every description, taxes, insurance, and all other expenses, 42,495 32

The receipts of income from January 1, 1838, to January 1, 1839, amounted to \$212,325 03

viz : For passengers, \$112,032 43

" freight, hauling gravel and mail, 94,827 31

" rents and storage, 5,465 29

The amount of dividends declared within the year was \$102,000 00

viz : July 1, 1838, 3 per cent., \$51,000 00

January 1, 1839, 3 per cent., 51,000,00

Before declaring the last dividend, the directors reserved for deterioration of perishable materials in the road, and depreciation of engines and cars, beyond the repairs, the sum of \$15,000.

NATHAN HALE,  
DANIEL DENNY,  
ELIPHALET WILLIAMS,  
NATH'L HAMMOND,  
WM. STURGIS.

Boston, January 17, 1839.

**Third Annual Report of the Charlestown Branch Rail-road Company.**

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts, in General Court assembled :

The Directors of the Charlestown Branch Rail-road Company, do hereby, respectfully, make their Third Annual Report of their acts and doings, receipts and expenditures, under their act of incorporation :

During the past year, the road has been completed from the junction with the Boston and Lowell Rail-road to Gray's Wharf, so called in Charlestown, and the location from Grey's Wharf to Sweet's Wharf, being the whole line of the road, has been filed with the commissioners for the county of Middlesex.

By a statement of the treasurer, made up to the 1st instant, it appears that the receipts of the company have been,—

From assessments,	\$50,125 00
" loan,	5,000 00

Total,	\$55,125 00
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The expenditures to the same date, as appears by the statement, have been,—

For engineering, surveying and other expenses,	\$2,600 03
" land purchased,	\$1,618 00
" damages for land taken,	2,000 67
" construction of road,	3,625 67
	47,496 49

Total,	\$53,722 19
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In compliance with the fifth section of the act passed on 19th April, 1837, the directors further report :

The total amount of receipts from the date of the last annual report to 1st instant,—

From assessments,	\$29,825 00
" loan,	5,000 00

Total,	\$34,825 00
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The total amount of expenditures the same period,—

For miscellaneous expenses,	\$1,008 43
" damages for land taken,	2,007 67
" construction of the road,	30,671 83

Total,	\$33,687 93
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All of which is respectfully submitted.

CHARLES THOMPSON,  
THOMAS C. SMITH,  
ABIJAH GOODRIDGE,  
EBEN'R BARKER,  
S. VARNEY.

CHARLESTOWN, Jan. 12, 1839.

*Annual Report of the Petersburg Railroad Company.*

PROCEEDINGS AT THE ANNUAL MEETING OF STOCKHOLDERS OF THE  
PETERSBURG RAIL-ROAD COMPANY.

At an annual meeting of the Stockholders of the Petersburg Railroad Company, held at the Bollingbrook Hotel in Petersburg, on Monday, the 4th March, 1839.

Present, in person or by proxy, 4092 shares, entitled to 1159 votes, constituting a quorum of the entire stock, which is 6055 shares, entitled to 2001 votes. The meeting was organized; Robert B. Bolling, Esq., Recorder of the town, was called to the chair, and Sam. Mordacai appointed secretary.

Charles F. Osborne, Esq., President of the Company, presented, and read to the meeting, the Annual Report of the Board, accompanied with



various accounts and statements, which were received, and ordered to be printed for the use of the Stockholders.

The meeting then proceeded to the election of a President and Directors for the ensuing year; whereupon Charles F. Osborne, Esq., was unanimously re-elected President; and Joseph Bragg, Benjamin Jones, and Robert B. Bolling, Esq., were elected Directors, on the part of the Stockholders. Samuel Mordecai and Thomas N. Lee, are Directors on behalf of the Commonwealth.

The meeting then adjourned.

ROBERT B. BOLLING, *Chairman.*

REPORT OF THE BOARD OF DIRECTORS.

The Board of Directors now present to you the result of their proceedings, during the last twelve months, exhibiting the present condition of the Company and its future prospects. They discharge this duty, on the present occasion, with more than ordinary satisfaction, because at no period have your affairs generally been more prosperous, than at present.

The road is now in fine order, the locomotives, cars and coaches, are in good repair, we have been entirely exempt from accident, and the revenue greatly exceeds that of any previous year. Nor do we discern any thing in prospect which should diminish the pleasure arising from these considerations.

The road to Raleigh, and that from Fredericksburg to the Potomac, we are led to believe, will both be finished before we again assemble, and these improvements cannot fail to enhance your general interests. All that will then remain to be accomplished, to consummate our most extended plans, and to realize the hopes we have hitherto indulged, are the establishment of a continuous connection with the Wilmington and Raleigh Railroad Company, and the extension of the road from Raleigh to Columbia. With these links, or with either one of them completed, (though we look sanguinely to the completion of both at no remote period,) the prosperity of this Company will be so well secured, that we believe it can neither be destroyed or impaired by any antagonist interests whatsoever.

The statements now submitted to you, show that the income for the year ending 31st January last, is \$121,440 50. Of this amount \$68,410 47 was received for freight, \$38,692 46 for travel, and \$14,337 58 for the mail and incidental transportation. The total receipts of the Company, for the year ending 31st January, 1838, was \$103,939 48, of which \$58,423 68 was for freight; \$30,305 45 for travel, and \$15,210 35 from the mail and other sources, showing a total increase in the past over the preceding year of \$17,501 3, of which increase \$9,986 89 is in freight and \$9,824 13 in travel and other transportation. From the Post Office Department we have received 2,309 89 less than in the preceeding year.

The Board are of opinion that the income for the current year will not be less than \$140,000.

We find the trade on the Roanoke annually becoming larger, and the transportation of goods, produce, and persons, already greatly increased by the extension of the Raleigh and Gaston road, will be constantly augmented as that road is advanced, and stage-lines to the south and south-west established in connexion with it. The facilities afforded by the Wilmington and Raleigh Railroad, now rapidly approaching to completion, and on which route a daily route to Charleston is established, insures to us a large increase of travel. No plan heretofore adopted can compete with this for safety, expedition and comfort. The traveller from New York can reach Charleston by this route in 66 hours, and from Baltimore to Charleston will

require less than 42 hours, a shorter time than it can be performed in by steamboats, and without the hazard attending them. Such a line as this, and another continuous line by Railroad from the north to the capital of North Carolina, must possess the great travel north and south, and secure to us important advantages.

We lay before you detailed statements of the charges incurred the past year, as well as statements of all other expenditures. The charges, you will perceive, amount to \$92,744 6; last year they were \$80,736 28. You will observe that the repairs of engines, &c., and the expense of running them, amount to more, and the repairs of road to less than last year. When you consider that we now run twice the length of line we ran heretofore, that the business requires two daily passenger lines on each division, going over 328 miles of road daily, and that all our other engines, not under repair, are constantly employed in the transportation of goods and produce, you may readily account for the addition to our expense in these items. The expenditures, have however, been mainly increased by repairs to the road, consequent to the storm in November last, the rebuilding of several bridges, a stationary engine, lathes, and other machinery in the work-shops, (which might properly be charged to capital,) and the decree against the Company in the case of Hinton. To these may be added, the expenses incident to our contracts on the Greenville and on the Raleigh and Gaston roads, from the last of which we received until recently no equivalent for our expenditure, as must be the case in the commencement of business on all roads. A portion of the Raleigh and Gaston road was opened at a dull season of the year, as the statements before you show, and it is only since the road was extended to Henderson, that we have been partially indemnified for our expenses. This evil, however, we consider as temporary, and one which we could not avoid without creating great dissatisfaction.

On reference to the accounts submitted at your last meeting, you will find the amounts to the credit of transportation and profit and loss to be \$43,543 81. Since then there has accrued a profit of \$28,696 45—making in all \$72,240 26. In June last, we divided among the stockholders \$24,220, and in November, \$21,192 50; leaving to the credit of transportation and profit and loss on the 1st of February last, \$26,827 76.

We estimate the expenses of the current year at \$89,542. In this are included the cost of three new bridges, which it is absolutely necessary to erect, and the expense of running on the roads with which we are connected. This increased distance increases, of course, the amount of charges, which will be compensated by our additional receipts.

Since your last meeting, one locomotive, three coaches, and thirty cars, have been bought or built, and paid for; the total cost of which amounted to \$20,300 46. This increase of motive power, &c., is insufficient for our trade and travel, as the murmurs of the community testify. The Board have ordered two more locomotives, and twenty sets of wheels and axles for cars. The locomotives will be on the road in the course of the present month, and the wagons will be constructed as speedily as practicable, with a due regard to economy. With this additional power, we hope to effect the transportation satisfactorily. Our means, however, are insufficient to meet the demands of the country at the most pressing seasons of business, or when the quantity of produce accumulates for a few weeks, after having been suspended by the previous impracticability of wagoning on the common roads, or navigating the river. As, however, the Raleigh and Gaston Company will ere long prepare to do their own transportation, our means will then be sufficient to effect our own.

The accounts and statements now exhibited, present a full view of the affairs of the Company; they are as clear as the most systematic arrangements can make them. The loan granted by the state has, as the accounts exhibit, been but partially and temporarily availed of. Under the act of the last session, the Board of Public Works did not feel authorized to issue other than a five per cent. stock, and unable to dispose of it, either here or abroad, at par, we deemed it advisable to retain it, and to ask of the legislature, at its present session, to convert it into stock bearing six per cent. This we have reason to believe they will readily assent to, and thus enable us to make a ready disposition of it and discharge our obligations.

The Board deem it proper to remark, that an erroneous opinion generally prevails, as to the profit on the transportation of goods and produce. An irregular business, sometimes excessive, and at other times inconsiderable, is attended with small profit. The charges necessarily incurred are at all times heavy. The wear and tear of the road, of locomotives and cars, is considerable; and the agencies, &c. incident to the business are numerous and expensive. If we relied on this branch of our transportation alone for income, we should be left, after paying the current expenses properly chargeable to it, with a small surplus. The expense of haulage on the best constructed level roads, with ample custom and most economical management, is estimated at  $4\frac{1}{2}$  cents per ton per mile. Where the grades are heavy, as on portions of our road, and of those connected with it, the expense is greatly increased; because an engine on such grades cannot do one-half the work which it can on a level. Assuming, however  $4\frac{1}{2}$  cents per ton per mile as the cost, it would amount to \$2 70 on 10 bbls. flour from Gaston to Petersburg. Our charge is \$3 50, which would leave a profit of 8 cents per barrel to pay interest on capital, dividends, &c.

So much has been said in the public prints, and elsewhere, respecting the mails, our proposals for its transportation, and the course which the board deemed it advisable to pursue, that they omit for this, and other reasons, further explanation on this unpleasant subject. Believing that their conduct, which has been freely canvassed, has been approved by you, we content ourselves with laying before you the correspondence held with the department. We asked but a fair compensation. We were driven into the present contract by circumstances beyond our control. In the position we occupied, no other safe alternative, in our opinion, was presented, than the one adopted. The Board also submit a copy of their memorial to Congress, in reference to the express mail pay, unjustly, as they conceive, withheld from them by the Post Office Department. Accompanying this, is a letter from the Postmaster General to the Committee of the Senate, and its report adverse to the claim. We must bend to power, when we have no other resource; but we retain the opinion that our claim is just, according to the letter and spirit of the contract, and we shall not relinquish the hope of obtaining a verdict in our favor, until we have exhausted the remedies enjoyed under our laws.

The Board applied to the last legislature of North Carolina for permission to form a permanent, direct connexion at Weldon, with the road of the Wilmington Company, and presumed from the reasonableness of the request, it would have been granted. In their wisdom, the privilege was denied; the right, however, is possessed by the Wilmington Company.

The Board regret that the committee appointed at your last meeting, (as required by the Board of Public Works,) have not performed the duty assigned to them. We earnestly desire that the subjects with which they were charged, should be thoroughly investigated and a comparison made

of the business and expenses of this road with other Railroads in the United States and elsewhere. In the absence of this investigation and report, we have only to assure you that every proper economy and responsibility has been introduced and effected, which can, in our opinion, be made with a just regard to the interests involved.

Appended to our report and accounts, is a statement recently furnished by the auditor under a resolution of the legislature, to which your attention is respectfully invited. You will perceive from it, the relative value of your investment, with others in the state to the present period. Comments would be superfluous.

Upon a review of the past, and in regard to the future, we see every thing to encourage us, and nothing to apprehend. We believe the day is not far distant when our stockholders will be amply remunerated, and the income of the Company sufficient, after satisfying them, to create a fund for laying down a permanent iron track, which our increasing business even now requires.

All of which is respectfully submitted,

By order of the Board of Directors,

CHARLES F. OSBORNE, *President.*

*Transportation for the year ending January 31, 1839.*

Amount received for produce and merchandize,

30,576,049 lbs.	\$68,410 47
Do Passengers, 16,030,	38,692 46
Do The mail,	12,768 10
Do Sundries, (timber, iron, &c.)	1,437 12
Do Storage,	132 36

\$121,440 51

*Charges on Transportation for the year ending January 31, 1839.*

General Superintendence,	\$6,500 00
Agents and labor at Petersburg and at other depots,	11,759 15
Pay of engineers and train captains and hands, with their board upon the line,	6,416 57
Oil and fuel,	9,736 31
Repairs of engines, including labor and materials, and the cost of a stationary engine, with lathe and fixtures,	17,059 38
Materials for repairs of road, overseers, negro hire and tools,	32,515 59
Other charges not embraced in the above,	3,170 24
Agencies on Greenville and Raleigh and Gaston Roads, and losses, (in this sum is included a judgment obtained by Hinton for \$2100, and charges for a house burned near the road,)	5,586 82

\$72,724 6

\$28,696 45



*First Annual Report of the Board of Directors, to the Stockholders of the  
Housatonic Railroad Company.*

*Continued from page 153.*

Whether it will be most advisable for the Company to again open their books for subscription to their stock, or resort to a loan for the purpose of raising the necessary amount to complete the road to Massachusetts line, will be a question worthy their serious consideration. We feel entirely confident of the ability of the Company to procure a loan on favorable terms, of sufficient amount, added to their own means, to complete the northern division of the road. When they shall have completed and put in operation the southern division, at an expense of nearly \$600,000, and shall be in possession of means, in addition to the amount of more than \$200,000, with which to commence the construction of the northern division, and if we are not grossly deceived in our estimation of the value of this stock on the completion of the road, it will be much to the advantage of the Company to raise, by loan, the necessary amount, rather than again to offer their stock to the public. It is unnecessary, however, to decide this question at present, as the Company is now in possession of all means necessary for their present purposes; and events may hereafter transpire, of such a character as to leave no doubt in the minds of any, as to the answer this question ought to receive.

It is probably known to most of the stockholders, and the community generally, that a company was incorporated some two years since, by the legislature of Massachusetts, called the "Berkshire Rail-Road Corporation," with power to construct a Rail-Road from the south line of that state at Sheffield, in the valley of the Housatonic, northerly to the village of West Stockbridge; at which place it will intersect with the "Western Rail-Road," leading from Boston to the west line of that state at West Stockbridge, which is now in course of construction; also with the Hudson and Berkshire Rail-Road, leading from West Stockbridge to Hudson, now completed and in operation; and also with the Albany and West Stockbridge Rail-Road, for the construction of which, a company is incorporated and organized.

The Berkshire Rail-Road Corporation has been regularly organized, and an arrangement has been entered into between that Company and the Housatonic Rail-Road Company, fixing a certain determinate point on the line between Massachusetts and Connecticut, at which said Company have agreed to terminate their respective roads, thus ensuring to this Company, a continued line of communication from Bridgeport to West Stockbridge, and thence to Boston, Albany, or Hudson.

\* \* \* \* \*

In order to appreciate correctly, the advantages to the community, which will result from the construction of this road, and to estimate with some degree of accuracy the business that will naturally fall on to it, we should, in the first place, examine its location with regard to navigable waters, and to means for transportation to market. Looking upon the map, we find on the east, at an average distance varying but very little from forty miles, the Connecticut River, one of those natural avenues contrived by the Author of nature to facilitate intercommunication and the interchange of natural and artificial products between different portions of the country. On the west, at a distance averaging between thirty and forty miles, we find the Hudson, whose waters are literally burdened by the incalculable amount of freights borne upon their surface. Midway between these noble rivers, is the Housatonic, stretching far away into the

north, affording, not the means of transportation upon its waters, but what is perhaps equally important to the manufacturing and mechanic arts, water power almost without limit, capable of being applied to the propulsion of machinery, at an expense comparatively trifling. We find a valley extending north from tide water at the city of Bridgeport, with an ascent very gradual, and over a soil of such a character as to render the construction of a Rail-Road extremely cheap and easy. We find in the same valley, a mineral wealth exceeding in variety and extent that of the same amount of territory in any part of New England. Indeed, any one looking upon the map, and seeing the location of this valley, as compared with the Hudson and Connecticut rivers, and then being made acquainted with its vast resources in water power and mineral wealth, can hardly resist the conclusion, that this was intended by nature as the site of one of those improvements which art has invented for overcoming those obstacles to transportation and intercommunication which exist in a state of nature. Let us next see what is the character of this road in respect to grades and curves. There is to be no grade exceeding 40 feet elevation to the mile, and only one exceeding 36 feet, and but three or four exceeding 30 feet. In going towards tide water, which will be in the way of the greatest heavy transportation, there will be no ascending grade exceeding 26 feet of elevation to the mile. It will not be necessary to make any curve of less than 1,000 feet radius. Consequently this road, in these respects, will bear a favorable comparison with almost any road in the northern states. Another question of still more importance, is next presented, which is, what is to be the cost of this road, and how does it, in *this* respect, compare with other roads in this part of the country? We have been furnished with a statement of the cost of several important Rail-Roads in the northern states, which we suppose to be correct, which is as follows.

Cost of the Boston and Worcester road, per mile	:	:	:	:	\$37,000
" Boston and Providence,	"				42,000
" Norwich and Worcester.	"				22,000
" Western Rail-Road,	"				34,500
" New Jersey "	"				45,000
" Camden and Amboy,	"				40,000
" Columbia and Philadelphia,	"				40,600
" Alleghany and Portage,	"				45,000
" Albany and Schenectady,	"				61,000
" Utica and Schenectady,	"				19,000
" Stonington,	"				52,000
" Hartford and New Haven, about					20,000

These roads are not all completed, but the cost of those which are not, is taken from estimates made by their friends or engineers, and is supposed to be correct. Their *average* cost will be found to be more than \$38,000 per mile. While the whole cost of the grading and superstructure of the Housatonic road, will be less than \$13,000 per mile; and adding the right of way, and all contingent expenses, the cost will not exceed \$15,000 per mile. The result, then, is, that less than one half the amount of net receipts required to pay six per cent. profit on the same length of road of the average cost of those named in the above list, would pay the same per centage on the stock of this road.

We might easily make up a statement, showing in dollars and cents an *estimated* amount of receipts for business to be done on this road, which would show a net profit to the company of 6, 10, or even 20 per cent. on the cost of its construction; but this we do not propose to do, for the reason,

that the *public*, as well as ourselves, know *how* easily such statements are made, and how little reliance is generally placed on estimates of that character. We prefer, rather, to state facts, and leave each one who reads, to draw his own inferences. We propose, therefore, merely to enumerate briefly, some of the principal items from which we suppose the road will derive its principal revenues.

And first, of the iron. This has, for many years, been one of the most important items in the business of this valley, (notwithstanding the distance from market, and the consequent expense of transportation,) because of the abundance of the ore, and the excellence and high reputation of the material manufactured from it, known under the general name of Salisbury iron. There are, in the valley of the Housatonic, nine blast furnaces for the manufacture of pig iron, the farthest of which is within five miles of the line of this road. There are also two more very near the line of the Berkshire Rail Road, which connects with this in Berkshire county. There are also in Litchfield county, within the same distance, a great number of forges, and at Canaan Falls one very large puddling furnace, which manufacture wrought iron. The Salisbury iron, from this valley, is now exclusively used in the national armories at Harper's Ferry, Springfield, and also, in various private armories in different parts of the country. And for axes, crowbars, picks, Rail Road and carriage axles, and for Blacksmiths' use, and for various other purposes, is preferred to any other iron. Almost the whole of the iron made in this valley, is now transported to navigable waters at an expense of from five to seven dollars per ton. The whole transportation connected with, and growing out of the iron trade of the valley, is estimated, by those intimately acquainted with the business, at 20,000 tons annually, and we believe that this estimate is none too high. This Rail-road can afford to do all this transportation at half the present prices, and still realize a fair profit on the business. Several of the furnaces, on and near the Housatonic, now transport their ore a distance of ten or fifteen miles, at an expense varying from \$1.50 to \$2.75 per ton. Ore can be delivered to these furnaces by the Rail Road, from inexhaustible beds in Berkshire county, at much less prices, and consequently, we suppose that large quantities will be transported on the Rail Road. Each furnace requires from 1500 to 3000 tons annually. Mineral coal is now used to some extent in the establishments for the manufacture of wrought iron. Its transportation costs about six dollars per ton, when it can be delivered by the Rail Road at \$3 per ton. There is every reason to suppose that it will be transported in very great quantities, for the use not only of the iron manufacturers, but for heating rooms and various other purposes. We have no doubt that such will be the result.

Marble, of a quality perhaps unsurpassed in the country, and in quantity wholly inexhaustible, exists on almost the whole line of this road, in the county of Litchfield, in Connecticut, and Berkshire, in Massachusetts. Great quantities of marble are now being transported from Berkshire county, by land, to the Hudson River, and thence to Philadelphia, to be used in the construction of the Girard College. The contracts for marble from that quarry, for that single edifice, are said to amount to more than \$300,000. The marble of the City Hall, New York, is from the same range. Its use in those two cases, is supposed to be sufficient evidence of its quality. The same range extends down the valley of the Housatonic, through the county of Litchfield, and in the immediate vicinity of the line of this road. It is now quarried and sawed, to considerable

extent, at several points in Litchfield county, and transported, in wagons to great distances, for tombstones and for ornamental purposes; while the expense of transportation prevents its being carried to market in blocks, or for purposes of building; we know of no other reason to prevent the quarrying and carrying to market of this article, to almost any extent.

Granite, in massive blocks, unlimited in quantity, and of a quality to compare, in color and texture, with the best eastern granite, is to be found in New Milford, within fifty rods of the line of this road. This, when the Rail Road is completed, can be delivered at New York, or any of the Atlantic cities south of it, and sold at a profit, at prices much less than those at which the eastern granite is now sold.

The well known stratified granite of Mine Hill, (within a short distance from this road, and to which a branch can be easily extended,) is already distinguished, in consequence of its singular formation, and its excellence as a fire stone. This latter quality is so extraordinary, that it has been almost exclusively used for hearths and jambs in the town where it is found, and those adjoining, for a great number of years. This stone lies in layers nearly parallel to the horizon, the layers varying in thickness from two inches to five or six feet; each separate layer, however, being of uniform thickness, so that stone of any size, shape or thickness, from the thinnest flagging to the most massive block or column, can here be obtained. The expense of quarrying is trifling, in consequence of the horizontal position of the strata, and the perpendicular fracture with which they always split. This range of stone covers an area of 2,000 acres—the supply is therefore inexhaustible. We suppose that this stone, for fortifications and public works; for platforms, blocks, and columns; for flagging and curbstone; indeed, for almost any purpose for which flat or hewn, hammered, or cut stone, can be required, can, upon the completion of this road, be delivered in the markets at rates much cheaper than any species of stone now in use; and that, consequently, there is no practicable limit to the business that may be done in this article alone.

The lime of this region, under the general name of Canaan lime has long borne the highest reputation for purity and strength. Masons, and all persons in the habit of using this article, concur in saying, that the lime of this range, which is found on the line of this road, through almost the whole county of Litchfield, will bear at least twice as much sand to the bushel of lime, as the common lime used in New York and the southern markets. As an evidence of its quality, the fact may be mentioned, that great quantities of it are annually transported to Hartford, a distance of forty miles, in wagons; and that, at the prices it must necessarily bear, it is still sold in preference to any other. We have no doubt that, with this Rail Road built, this article would compete successfully with any lime now offered in the market; and that consequently, great quantities of it would annually pass over the road.

A very singular and valuable deposit of porcelain clay exists in New Milford, near the line of this road. This clay is highly valuable for the manufacture of all those articles which are to be exposed to intense heat; such as fire brick, portable furnaces, stove linings, crucibles, &c.; and for these purposes, is found to be of the very best quality. All these articles are now manufactured at New Milford, to considerable extent, and transported to market where it is found that, in consequence of their excellent quality, they can now compete successfully with the imported articles. The effect of a Rail Road communication, which would reduce one half the cost of transportation on this manufacture, will be readily appreciated.



The *water power* of this valley is an item of the first importance in connection with this subject. From the head of Canaan Falls to New Milford, a distance of about thirty-three miles, the Housatonic River falls four hundred and sixty feet; almost every foot of which fall can be improved at a very moderate expense. At two several points, more than 100 feet of fall can be accumulated within a distance of half a mile. It is computed by those well acquainted with both rivers, that the volume of water in the Housatonic at Canaan Falls, is fully equal to, and the fall considerably greater, than that of the Passaic, at Patterson. The water in the Housatonic is considerably increased between Canaan Falls and New Milford, by tributary streams. It has been well ascertained that these powers may be purchased and improved, and water power rented at less than half the prices at which equal powers are now held at Patterson and Lowell, and still an immense profit made by the operation. It will be recollected that this company has the authority to purchase, improve, and rent these powers, if they see fit to avail themselves of that privilege. No reason can be assigned for the fact that this water power has not long since been improved, and applied to manufacturing purposes, except the discouragement to manufacturers to locate any establishment at so great a distance from market, without facilities for transportation. When such facilities are furnished by this road, can any one doubt that the improvement of the water power, and, consequently, a vast increase of the trade, travel, and transportation through the valley, will necessarily follow?

But, in addition to all this, it should be borne in mind, that the region through which this road is to pass, contains an *agricultural*, as well as mechanical and manufacturing community; and that, after going up from Bridgeport, a distance of perhaps fifteen or twenty miles, we find a section of country of *at least* ten miles in width, on each side of this road, extending through its whole length, which must of necessity throw its whole transportation to and from market, of every description on to this road;—we say *of necessity*, because we know that any articles going to market, situated within ten miles of this road, can be brought on to it, and thus delivered in the market, *cheaper* than by any other mode; and we know further, that all articles of trade, seeking a market, do, (in consequence of the competition which always exists in this country,) *of necessity*, follow those avenues which are the cheapest; and hence, all the transportation to and from this section, of ten miles in width, on each side of this road, we suppose will as naturally fall on to it, and pass over it, as they would pass up or down the Housatonic River, if that were navigable like the Hudson and Connecticut; and the territory that will thus become tributary to the road, is not entirely confined to this state, because the trade and business of an important section of Berkshire county, will also naturally seek an outlet in this direction.

Let us mention the single article of *plaster*. It is well known that (with the exception of a short distance in the immediate vicinity of tide water) the farmers, through this whole region, use from one to five tons each of plaster annually, and that its transportation now costs them from four to seven dollars per ton, varying with the distance; these prices can be reduced fully one half, and probably more, by the Rail Road. Such a reduction in price, will naturally increase the quantity used; what an amount then will be paid to the Company annually for transporting this article alone! It is not *plaster* alone, however, but every article which an agricultural, mechanical, and manufacturing community, require *from* market, or send *to* market, which will be transported over this road. Let any one undertake to estimate the amount of this transportation, and he will surprise himself with the result of his calculations.

In addition to all these items, we must also take into the account the receipts from the transportation of passengers. This is a more difficult item to estimate, than either of the others. We can surely rely, at all seasons of the year, not only upon all the *way* travel, to wit, that of persons passing up or down the valley from one point to another; but also upon all the travel of persons going to and from any portion of the valley, including a considerable portion of Berkshire county, to New York, or the south, or indeed to almost any part of the country, from the well known fact, that since the modern improvements in travelling facilities, the traveller, going in any direction, (almost as a matter of course,) seeks the nearest navigable water or Rail Road. Added to this, all the communication from a very important section of the New England states, will, in the winter season, by means of the Western Rail Road, naturally fall upon this road, and pass over its whole length, towards New York, or indeed any section of the country south of Bridgeport. All this travel we suppose, beyond a doubt, will fall upon this road, independent of any travel from Albany to New York.

Such, then, are some of the more important of the sources from which we suppose this road will derive its revenues; and we can freely say, that we have the utmost confidence that these revenues will be abundant to pay a very liberal profit on the investment, immediately on the completion of the work. What will be added to this amount after the effects consequent upon the opening of such a communication shall have been produced, in increasing the business and population of the valley, we leave to each one to conjecture. We look upon this as being *literally* a project for *internal improvement*, the object of which is to afford facilities for transportation and travel, to the interesting section of the country through which it is to pass, and which has been so long (as it were) shut out from the enjoyment of its natural advantages, by the want of some facilities of this description. As such an improvement, this road was originally projected; as such, it has been thus far prosecuted; and as such, we fully believe it will be continued to its full completion, independent of any ulterior considerations. If indeed this should in the event prove to be the avenue through which the winter travel from Albany and the west shall pass to New York and the south, as many of its friends have believed it would, this circumstance would unquestionably add somewhat to the value of the stock of this Company, (though we are aware that the mere transportation of passengers by Rail Road, during the most severe weather of winter in this northern climate, is not so profitable as many have supposed.) Still, no one engaged in this work, has ever dreamed that the prosecution or completion of it was in any manner dependent upon the course which New York and Albany travel would ultimately take. The stockholders of this Company reside, almost without exception, on the line of the road; they are composed of the active business men of the city of Bridgeport, and of the farmers, manufacturers, and business men of the country, and they have embarked their means in this project, not with any speculative intentions, but for the purpose of opening a communication between the city and the country, from which they expect to derive mutual benefits. This object, it is believed, they will steadily pursue, until they shall have the satisfaction of seeing it fully accomplished.

By order of the Board of Directors,

WILLIAM P. BURRALL, *President*.

Bridgeport, 31st October, 1838.

**ENGINEER'S REPORT.***Engineer's Office, Bridgeport, October 1st, 1838.*

To the President and Directors of the Housatonic Railroad Company:

GENTLEMEN,—I have the honor to submit the following brief statement of the progress of the work on the Housatonic Railroad, from its commencement to the present time.

On the twentieth of May, 1837, the survey and location of the line was commenced about three miles north of Bridgeport.

Since that time several routes have been carefully surveyed from Bridgeport to the south line of the state of Massachusetts. On the route selected, the centre line from Bridgeport to New Milford, is now permanently fixed, and divided into 35 sections, of one mile each; the whole of which, except the superstructure of the road and bridges, has been relet by Bishop and Sykes, the original contractors, to the different persons or companies, who have now employed a force equal to about 300 men, to which they are constantly making additions.

On the twentieth of July, just two months from the commencement of the location, the grading was commenced on section No. 13, and is now in progress on seventeen sections. No. 12 will be completed during this month. No. 14 is now ready to receive the superstructure, and Nos. 15 and 17, will be completed, or nearly so, next month. Several other sections are in a very forward state.

Thirty-three culverts, varying in size from one to four feet, are completed. Two of 10 feet span are now being constructed, and one of 16 feet, and 166 feet in length, is nearly finished.

The culverts are all constructed in a permanent and substantial manner, and, I think, will bear comparison with such work on any other road. The contractors are generally doing the light work on their sections, reserving the deep cutting and rock, for winter. By this means they will be enabled to employ a large force during the winter, and generally, to finish their grading in the early part of next summer.

Should nothing occur to retard the progress of the work from this time forward, I feel no hesitation in saying, that the road may be put in successful operation from Bridgeport to New Milford, during the next year.

In April last, by request of the Commissioners of the Berkshire Railroad Company, I made an examination of a route for their road in Massachusetts. The country was found to be extremely favorable for its construction. This road will unite with the Housatonic on the south, and with the Hudson, Albany, and Boston roads, on the north, near West Stockbridge. This will make a continuous line of Railroad from Bridgeport to each of those cities.

I am, very respectfully, your obedient servant,

R. B. MASON, *Chief Engineer*

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*Hudson and Berkshire Railroad.*

From the Report of the Hudson and Berkshire Railroad Company, just published, we collect the following:

The Road from the Public Square in this city, to the State line at West Stockbridge, was completed the latter end of September. The Company commenced business with one locomotive, and the first train of cars

passed over the road on the 29th of that month. In consequence of the accumulation of freight at each end of the road, it became necessary to procure an additional locomotive. From the 1st of November to the close of river navigation, two trains were in operation, making a trip each day. The freight and passage money for that short period (two months) amounts to \$7,482 39. The road from the State line to the village of West Stockbridge, was completed about the middle of November. In regard to the prospects of future income, the Report says: "that the receipts upon the Road during its operations last fall, must not be assumed as any data upon which to calculate its future income. During a large part of that time the Company had but one engine, and after the second was put upon the road, the Superintendent was obliged to refuse a large amount of freight, for want of a sufficient number of cars to accommodate the same. A portion of the cars were occupied during all the time of running, in transporting their iron and timber from one end of the line to the other, and in distributing wood to the different stations along the road.

"From the experience already had, the Board believe it safe to estimate for the next season, 20 passengers and 25 tons of freight for each train, making 80 passengers and 100 tons per day, and that the several trains may be run 250 days. Upon this basis the estimate of income will be as follows:—

80 Passengers per day for 250 days at \$1 each, - - -	\$20,000
100 tons per day for 250 days, at \$2 50, - - -	62,500
Total estimated income, - - -	82,500
From the experience of last fall, it is estimated that the expense of running the road for the season will not, at most, exceed the sum of - - -	20,000
Leaving for interest upon the capital, -	\$62,500

"This estimate is made without reference to the benefits expected from a connexion of this road with the Great Western Railroad, now under construction from Worcester to the line of this State. That road is now located throughout the whole line, and the grading in progress: the portion between Worcester and Springfield is nearly completed, and that portion between Pittsfield and its connexion with our road at the State line is to be completed during all the next season. The completion of this last mentioned portion will greatly increase any previous estimate of income, both in passengers and freight; and the completion of the whole line of the Western Railroad, which will shortly be accomplished, it is believed, will more than double the results of any calculation previously given."—*Republican and Advertiser.*

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*The Steamboat.*

The House of Representatives recently adopted by unanimous vote, a Resolution that the President present to the only surviving son of *James Rumsey*, "a suitable gold medal, commemorative of his father's services and high agency in giving to the world the benefits of the Steamboat."

When this resolution was before the House, Mr. Rumsey, of Kentucky, a nephew of the deceased James Rumsey, in an unpretending, but clear



and touching speech, detailed the evidence which establishes—conclusively, as it seems to us,—the fact, that as early as 1786, James Rumsey did succeed “in propelling his boat against the current, by steam alone, four or five miles an hour.” The experiment took place on the Potomac, near Shepardstown, Va., in the presence of hundreds of spectators, and among the witnesses surviving, is *Dr. Alexander*, of Baltimore, a gentleman of the highest character, and who was on board Rumsey’s boat.

Finding, however, little encouragement in his own country, Rumsey went to England, and there, with the perseverance of genius, confident in the results of its own clear apprehensions, and not to be discouraged by the doubts, the coldness, or the sneers of the world, he labored to perfect his invention, and had all but finished his new boat of between one and two hundred tons, and named a day for the trial, when, in 1792, death arrested his hand.

Hungry creditors seized upon his little property, and with him died, until revived and perfected by Fulton, the Steamboat.

While thus vindicating the priority of Rumsey’s claim, his honorable relative does full and ample justice to Fulton, from whose fame he seeks not to detract a single ray. To Rumsey, whom Fulton knew in England, and to Fulton conjointly, he justly ascribes the character of “the highest benefactors of their species,” and thus eloquently and forcibly depicts the immeasurable value to America, and to the West especially, of steam navigation :

“Sir, you have no arithmetic of powers vast enough, by which to estimate the benefits of the Steamboat in a pecuniary point of view alone. Their labors, too, have tended, in no small degree, to the preservation of human life. I am aware that the truth of this last assertion may not be universally admitted ; but it will scarcely be questioned, at least by a Western or South-western man, who recollects the old mode of conducting our commerce. Small as the commerce was before the introduction of the steamboat, it drew off a larger portion of the population than is now necessary to transact it, although so immensely extended. Even then, more died in the long and exposed and laborious voyages in keels and barges, or the exhausting return by land under a vertical sun, than now perish from steamboat explosions. But they dropped off one by one ; they sank obscurely into the grave by the wayside ; or, after reaching their homes, fell victims to disease incurred by a long sojourn and travel in southern climes. The consumption of life, though known to be great in the aggregate, happening so much in detail, made no impression. But now, every steamboat accident creates a sensation, and is proclaimed in the universal press of the country. If the mighty commerce now in progress on the Western waters had to be conducted in the old way, it would require the agency of so many individuals, that it would not be long before the sides of the public roads, from New Orleans to the upper States, and the banks of the great river which pours into the Gulf the congregated waters of nearly half a continent, would be almost continued graveyards.”

We have heard of the clear apprehension of results, which is one of the elements and powers of genius. The following extract from a letter by *Brissot de Warville*, Mr. Jefferson’s friend and correspondent, presents an extraordinary instance in point. Rumsey anticipated in 1789, what, at the distance of half a century, the Great Western, in 1838, has proved. We quote from Mr. Rumsey’s speech :

“In a work published by *De Warville*, in 1789, which will be found

in your library, he states that, being in Philadelphia in September, 1788, he attended by invitation, and witnessed Fitch's experiment. In a note written in the February following, in London, he says:

"I have just become acquainted with Mr. Rumsey, of Virginia, a gentleman of great ingenuity, who proposes building a vessel in which, without sails, and by steam alone, he will cross the Atlantic in fifteen days."

"This sublime conception, this bold undertaking of Rumsey, the accomplishment of which in the last year has created so vast a sensation was not unknown to me and others of his family; but without the high authority of De Wardle, I would not have ventured to have named it."—*N. Y. American.*

From the United States Gazette.

*A Successful and Extraordinary Experiment—Steam Locomotives and Railroads—M. W. Baldwin's Steam-Engines.*

We are enabled to spread before our readers this morning, the official details of what may justly be described as one of the most successful and extraordinary experiments that has yet been made by locomotives on Railroads. The facts possess the deepest interest, as well for scientific men as for the friends of internal improvement. Indeed nearly the whole community cannot but feel some concern in a matter of this character, nineteen-twentieths of our citizens being interested, either directly or indirectly in the coal trade, or at least in every measure calculated to increase the facilities of transportation, and hence to decrease the price of that valuable product. The engine made use of on this occasion was one of Mr. Baldwin's second class. The weight drawn was that assumed by the engineers of the road in their estimate of the cost of transportation over it, as the load of an engine of twelve tons weight and twelve inch cylinders—or one fourth more powerful than the engine which appears to have been used on this occasion. Thus it will be perceived that the anticipation has been more than realized by the results of this experiment—results every way gratifying, and without precedent, if we are not mistaken, in the history of enterprizes of this character. But to the details:

"The Philadelphia and Reading Railroad is one of the most interesting works of internal improvement in the United States, when regarded either with reference to the skill which has been exercised in its location and construction, or the numerous interests it is calculated to promote. No improvement in the country possesses superior resources, and but few Railroads can compare with it in capacity for economical transportation. The public may, therefore, look forward to it as an instance which will exhibit the maximum advantages of Railroad transportation.

On the 11th inst. we were indebted to the politeness of Wirt Robinson, Esq., Civil Engineer, &c. for a favorable opportunity of viewing that portion of the Railroad which has been completed, and of witnessing the day after, one of the most successful performances in the way of locomotive transportation, that has fallen under our observation, either in Great Britain or the United States, or, that we remember to have seen authentically reported.

On Tuesday the 12th instant, on reaching the depot at Reading, we found the locomotive "Never-Sink," (constructed by M. W. Baldwin Esq. of Philadelphia,) preparatory to starting with her train for Bridgeport

(opposite Norristown.) consisting of 45 cars laden with nails and hoop iron from the factory of Messrs. Keim and Whitaker. We took seats on the tender, and accompanied the train throughout; and it is believed that the details of the performance will prove interesting to those engaged in Railroad enterprises, we venture to place them before the public.

The weight of the Locomotive '*Never-Sink*' is  $10\frac{1}{2}$  tons, with water and fuel; single geared with driving wheels  $4\frac{1}{2}$  feet in diameter, sustaining  $5\frac{1}{2}$  tons pressure, the remaining  $4\frac{3}{4}$  tons of the engine being supported by a truck adjusted to conform to the curvatures of the road: cylinders  $10\frac{1}{2}$  inches in diameter, with a piston stroke of 16 inches; steam gauge adjusted to 120 lbs. to the inch.

The tender with fuel and water weighs 6 tons, and is so arranged that from 1 to 2 tons of its weight may be transferred to the driving wheels of the engine. In this instance the tender was so adjusted as to add about  $1\frac{1}{2}$  tons to the adhesion of the engine.

The train in question consisted of 44 single cars and one double car, the former weighing  $1\frac{1}{2}$  tons each, empty, and the latter 5 tons; cars all mounted on springs, with wheels 3 feet in diameter, and outside journals 1 3/4 inches in diameter. The entire weight of the cars was 71 tons; the freight, consisting of nails in casks, and hoop iron, 150 tons; 28 men, say 2 tons, making the gross weight of the train 223 tons of 2240 lbs. The length of the train, including engine and tender, measured 595 feet.

At  $10\frac{1}{2}$  o'clock, A. M. the engine was attached to the train, with the steam blowing off at 120 lbs. to the inch; the road was in good order and the weather clear and calm. The train rested on an inclination of 9 feet to a mile, the profile changing however to a level, within 50 feet in front of the engine. With the valves in gear, the engine, when the steam was admitted to the cylinders, proceeded, without slipping or any other interruption, to put the whole train in motion; and after passing over a level of 800 feet, entered a grade descending 3 7/10 feet per mile, performing the 1st mile in 6 minutes; the 2d mile in  $4\frac{1}{2}$  minutes; the 3d mile (the grade having changed to 18 feet per mile) in  $3\frac{1}{4}$  minutes; the 4th mile in  $3\frac{1}{4}$  min.—when the road being perfectly straight, and still descending at the rate of 18 feet per mile, the steam was shut off with the view of ascertaining the influence of gravity on the velocity of the train. In this manner the 5th mile was performed in 3 minutes, showing an accelerated velocity, and that the resistance of the train, even at a velocity of 20 miles per hour, was less than 8 lbs. to the ton.

The resistance from friction, when a train is equilibrated, on an inclination of 18 feet per mile, would be about 7.64 100 lbs. per ton; but as the train was accelerated, it is obvious that the resistance to traction on the Reading road is less than 7.64 100 lbs. and probably not more than 7 lbs. per ton. The distance from Reading to the station at Pottstown, 18 miles, with an average descent of  $6\frac{1}{2}$  feet per mile, was accomplished in one hour and 23 minutes, or at an average speed of about 13 miles per hour. Having replenished the tender, with fuel and water the engine moved off with the whole train, from a state of rest, on a perfect level, with as much ease as in the former instance, and reached the Phoenixville Depot in 59 minutes; travelling from 9 to 15 miles per hour, over a road, one-third of which was level, and the remainder in no instance descending more than 12 feet in a mile, and not averaging more than 5 feet per mile.

At the Phoenixville station it became necessary to pass from the left to the right track. The engine was stopped, with the centre of the train

resting in the turn-out, and the forward and after portions occupying respectively the right and left tracks. The road, as in the last instance, was perfectly level. Notwithstanding these disadvantageous circumstances, the engine put the train in motion with comparative ease, and reached Bridgeport, ten miles distant, in 47 minutes, travelling at an average speed of  $12\frac{3}{4}$  miles per hour. More than half of this stage is level, while the grades on the remaining portion do not exceed  $10\frac{1}{2}$  feet, or average more than 8 feet per mile.

The total distance from Reading to the Bridgeport station is 40 miles; time consumed in performing the trip, 3 hours and 56 minutes, including stoppages; time in motion 3 hours and 9 minutes; average speed, about  $12\frac{3}{4}$  miles per hour—13.10ths corde of oak wood consumed, and 895 gallons of water evaporated, lowest pressure indicated by the steam gauge, 80 lbs.; highest, 120 lbs. The performance of the "Never-Sink," where the road was straight and level, appeared to be about  $10\frac{1}{2}$  miles per hour; the average throughout, owing to the resistance from curvature, when reduced to a level, would indicate about nine miles per hour.

WILLIAM S. CAMPBELL.  
ROSS WINANS.

(From the U. S. Gazette.)

*Fare on the Rail-roads.*

I do hope that in granting charters hereafter to Rail-road companies, the Legislature will look closely into the question of what provisions are necessary to guard the citizens from imposition. At present, the rates of charge appear to be most unreasonably and oppressively high, as I will now proceed to show.

From Philadelphia to New York, the fare has been five dollars a head. It is now reduced to four dollars. Fifteen passengers, on an average, make a ton. The late charge, therefore, was equal to seventy five-dollars a ton. The present one is sixty dollars a ton.

From Philadelphia to Baltimore, the fare is four dollars, which makes sixty dollars a ton.

From Baltimore to Washington (40 miles) the fare is 2 dollars 50 cts., a ton, of which 50 cents are paid to the State of Maryland, leaving \$2 to the company. This is at the rate of seventy-five dollars a ton for one hundred miles.

The Reading Rail-road Company, I perceive from their advertisement, charge \$2 a head from Reading to Norristown. The distance may be about forty miles. This is at the rate of seventy-five dollars a ton, for one hundred miles, on the same rate that is paid on the Baltimore and Washington road.

These rates *appear* to be excessively high and extravagant. I have no knowledge of my own upon the subject. I never built a rail-road nor was concerned in one, and am not now; but sometime ago there was a report published by the Reading Rail-road company, signed by two Engineers, of the name of Jenkinson, or some such thing, and endorsed by two Directors, both gentlemen of high respectability, which I remember to have read at the time, with curiosity and interest. What I am about to state is derived from that report, which it is to be supposed was deliberately and fairly made, for the information of the public, and not for any purposes of speculation. As one of the public, for whose instruction it was published, I examined that report attentively, and the lesson it imparted, is what I am now about to apply. If my memory deceive me,



of course the Engineers and Directors, in the same spirit of considerate and disinterested kindness which prompted them to incur the trouble and expense of the report, will not hesitate to furnish a correction of any error, I may fall into. My object, like theirs, is to enlighten, and not to deceive our fellow-citizens: We ought therefore to work together.

Well, if my recollection be correct, the report proposed to give the actual cost of transportation upon the road. It went carefully and minutely into all the details, which were reduced to figures and arithmetical results. Figures, every one knows, cannot lie, and such a statement, in figures, which any one acquainted with the common rules of arithmetic can go over, is worthy of all reliance. The process, I will not undertake from memory to set forth, but the final conclusion, I think, I well remember.

According to the report, the actual cost of transportation on the road to the Company, is, or is to be, (which is the same thing) fifty-three cents a ton for rather more than one hundred miles.

Fifteen passengers, as before stated, make a ton. The cost of transporting a passenger one hundred miles, therefore, is the 1-15th part of 53 cents, or  $3\frac{8}{15}$ ths of a cent a head. For forty miles, say from Reading to Norristown, it is  $2\frac{5}{15}$ ths of  $3\frac{8}{15}$ ths cents, or say about one cent and 30 hundredths of a cent.

But the actual charge, as has been seen, is two dollars for forty miles for each passenger. Deduct the above cost, say 1 cent and 30 hundredths of a cent, and it leaves for clear gain to the Company on each passenger, one dollar ninety-eight cents and seventy hundredths of a cent.

Probably some allowance is to be made for the difference between the cost of passenger cars and burthen cars, but it cannot be much. There may be some other small allowances to be made besides, and then there is to be interest on the capital. Still, it seems to me quite clear, that the rate of charge permitted by the charters of Railroads is far too high, and I hope that in any new ones which may be granted, the Legislature will correct the error. It is very material to travellers, and also to the U. S. Mail.

I may, perhaps, at some future time, trouble you with a few more words on this subject. Z.

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From the United States Gazette.

*Fare on the Railroads.*

An article appeared in the U. S. Gazette of March 27, under the above head, and over the signature of Z. complaining of the "unreasonably and oppressively high" rates of charges for passengers on Railroads in general, and on the Philadelphia and Reading Railroad, in particular.

It is somewhat singular that a person of the writer's evident ignorance on the subject of Railroads, should attempt, either by a wilful or unconscious perversion of facts, to persuade the public of being so grossly imposed upon as would appear from Z's conclusion, viz., that the Reading Railroad Company make one dollar ninety-eight cents and 7-10 of a cent "clear gain" on each passenger transported over their road.

Z in a most uncourteous allusion to the Engineers of the above road, says that the cost of transportation on the road is 53 cents per ton for about one hundred miles, and that, *therefore*, at 15 passengers to a ton, the cost

of transporting one passenger the same distance is 1-15 of the above sum or 38-15 of a cent a head.

Had Z read the report as attentively as he asserts, or been as candid as he ought, he would have observed that the above 53 cents, is stated as the cost of transporting a ton of *coal*; and that 15 passengers, the number he estimates to a ton, would cost \$3 975, transported to the same distance, at 26½ cents per head, the cost as stated by the Messrs. Robinson, Engineers of the road, thus sparing himself the ridiculous assertion that the cost of transporting a ton of coal and ton of passengers is the same.

The first cost of a passenger car, capable of containing 3 tons of passengers, is about 8 times that of a burthen car holding the same weight of *coal*; it weighs four times as much; and when the car required to keep the former in order, the rapidity of its motion, and the greater *proportional* quantity of fuel consumed in its transportation be considered, it is certainly not surprising that it should cost more to transport 15 passengers 20 miles, than a ton of coal 10 miles per hour.

Z establishes a comparison between the charges on the Reading road, and those on the Camden and Amboy, the Philadelphia and Baltimore, and the Baltimore and Washington.

The charges on the 3 latter roads, are at the rate of \$4,17, \$4,00, and \$6,58 per 10 miles, respectively. The present charges on the Reading road, between Reading and Norristown, 41 miles are \$2 in No. 1 cars, and \$1,50 in No. 2, making an average of \$1,75; or at the rate of \$4,27 per 100 miles. The charges from Philadelphia to Harrisburg, via the Columbia Railroad, are at the rate of \$4,63 per 100 miles, and on the Harrisburg and Lancaster Railroad \$6,25 for the same distance.

It will be conceded, that the comparative rates of charges upon Railroads should be proportioned to their original cost and quality of construction, their amount of travel, and their management and the expense of accommodation to the public on each in keeping the track, cars, &c. in good repair and order.

In original cost, the Reading Railroad cars exceed any of those mentioned above; the amount of travel over that portion, between Reading and Norristown has been as yet but one half of that over the *least* travelled of the above roads, and one-fifth of that over the greatest; and whether the present condition and management of the road will allow its charges to bear comparison with those on the above roads, and others, it is for the travelling public to determine.

It is respectfully suggested, that the same "spirit of considerate and disinterested kindness," Z praises in others, may prompt him to give the public an explanation of the causes which have produced the present depression in a certain canal stock. It may prove interesting, until a more vulnerable point than "high charges," be found on which to attach a rival improvement.

Y.

#### *Railroad Dinner—Illumination.*

*Natchez, February 26.*

Yesterday was a glad day for Natchez. At four o'clock P. M. more than two hundred guests sat down to a sumptuous dinner at the Southern Exchange. Hon. Edward Turner, Chancellor of the State, President, and Messrs. A. L. Gaines and Andrew Brown, Esq's. Vice Presidents.

Every circumstance connected with the dinner went off in the most

pleasant manner, and the regular toasts, which we publish, were received with ardent enthusiasm. The fourth toast called out Gen. Quitman, who responded in a warm-hearted practical address of considerable length.

The fifth toast called out the distinguished guest of the city, Gen. Robt. Y. Hayne, of South Carolina, who made a speech which thrilled the auditory for the space of half an hour. We shall give this eloquent production, as well as the other addresses at large, as soon as we have time to write them out.

The other gentlemen called out by the regular toasts were, Messrs. Bingaman, Armat, Murchison and Mellen, each of whom responded in handsome and appropriate addresses.

Hon. Robert Josselyn, of La Fayette county, replied most eloquently to a complimentary toast given by the President, Chancellor Turner. Gen. Huston was also called out in a speech by a toast, and made a fine reply.

The following are the regular toasts:

1st. Internal improvements.—The talisman whose magic influence will call into active exertions the giant energies of our youthful State; hers is the charm to make the wilderness glad, and the waste places to blossom as the rose.

2d. Our Country.—Blessed with the rich heritage of civil and religious liberty; she is doubly blessed in her sons, whom no toil can tire, no danger appal, no enterprise however great or wonderful can stay. Her course is ever onward.

[Tune—"Hail Columbia."]

3d. Our State.—For a long lapse of years like a troubled sea, tossed by the storms of faction and sectional jealousy, has at length sacrificed these heart burnings upon the altar of Internal Improvement.

4th. The President of the Mississippi Railroad Company.—The projector of this grand scheme of internal improvement: he has by his untiring exertions in its behalf, and by the zeal and ability which have characterized his course in every station, built up for himself a temple in the heart of every true son of Mississippi.

[Tune—"Here's a health to thee Tom Breeze."]

5th. South Carolina.—Our elder sister of the South: we hail with pride and pleasure the distinguished individual who represents her on this occasion; the living personification of her chivalry, her talents and her enterprise.

"Here's a hand my trusty friend,  
Then gie's a hand o'thine."

[Tune—"Auld Lang Syne."]

6th. The Senator from Adams County.—He has ever been found where duty called him; the able representative in time of peace, the ready defender in the hour of trial.

[Tune—"Jackson's Morning Brush."]

7th. Our Representatives—"Good men and true."

8th. The day we celebrate.—In all after time may it ever be one of the greenest among memory's green spots.

[Tune—"Oft in the stilly night."]

9th. The Sister Cities of the Mississippi—Rivals only in their efforts to advance the interests of the whole State.

10th. The fair—Day stars of creation, lights of life's darksome wilderness.

There was a number of volunteer sentiments given, which we shall collect and publish in a future paper. We only subjoin a toast sent in by a Natchez lady, which was drank with the gallant enthusiasm of the Mississippians:

"The Marriage of the Waters—By the exertions of the President of the Railroad Company, by the act of the Legislature, and by the acceptance of the company this day, a marriage has been contracted between the ancient and wealthy "Fathers of Waters," and the amiable and lovely Pearl river. What God shall join together, let no man put asunder!"

The illumination was general and most splendid. The "City of the Bluffs," was alive with pyrotechnics, and thousands of smiling faces thronged the streets. At half past eight, the illuminated Railroad Car, filled with a dense crowd of passengers, departed for Washington.

The Railroad for ever!

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*Baltimore and Ohio Railroad.*—A warm debate occurred some days ago in the House of Delegates, as to whether the State should guarantee the payment of the three millions of dollars which were subscribed by the city of Baltimore to the Baltimore and Ohio Railroad. After having passed the bill and sent it to the Senate, it was again sent for and returned to the House, as required by a vote of 35 to 34. The Senate in the mean time originated and rejected a similar bill, only two members voting for it. We have seen no notice of the grounds upon which so decisive a vote was given.

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*Nashville Railroad.*—The House of Representatives of Mississippi have unanimously passed the bill authorizing the construction of the Nashville Railroad. The bill provides for a subscription on the part of the state for \$1,250,00 of stock, which is to be paid for as required by the board of directors, by the Exchange Bank, as a bonus to the state for having increased its capital to five millions of dollars.

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*Railroad Travelling.*—The Martinsburg Gazette states the fact that the accidents which occur in travelling on Railroads are much fewer than those which take place from any other kind of conveyances, and in proof of the fact adduces the Returns which have been made by two Railroad Companies in England, of all passengers transported on their Roads between 1831 and 1838, and all deaths and accidents that have happened upon them during that time. From this it seems that the number of passengers was *forty millions*, and the number of deaths by accident on the Roads only *ten* and but *four* of these were passengers. In the United States the proportion of accidents are larger.—*Frederick Herald.*

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*How they do Down East.*—The following paragraph, will inform the reader in what manner the old Bay State orders things, when she happens to have on hand an important work of improvement, in an unfinished state. As Massachusetts is not in the practice of indulging in rash, unwise or thriftless disbursements, perhaps her action in this particular may tend to point out, in the case of other States, similarly situated with regard to great public improvement, the path of interest and duty.

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*Massachusetts Legislature.*—The committee on the Western Railroad reported in the House, yesterday afternoon, a bill authorizing the Treasurer of the State to borrow \$1,200,000 for the completion of that great work of internal improvement.